either but not both of conductive wirings **53** and **56** present. If the conductive wirings **53** and **56** are both present then the conductive wirings **53** and **56** may be helically would in a braided manner, resulting in a braided conductive wiring **57** shown in FIG. 6. Also if the conductive wirings **53** and **56** are both present then the conductive wirings **53** and **56** may be helically would in a served (i.e., overlaid) manner, resulting in a served conductive wiring **58** shown in FIG. 7.

FIG. 5 shows a helical angle θ of the conductive wiring **53** relative to the axis of the dielectric core **50** (i.e., relative to the direction **54**). For some embodiments of the present invention, θ is between about 30 and 60 degrees.

FIG. 8 depicts an outer dielectric jacket **59** extruded onto the helically wired dielectric core **50** of FIG. 5, thus forming a conductive rod **60**. The conductive rod **60** comprises the outer dielectric jacket **59** on the helically wired dielectric core **50**.

FIG. 9 depicts a cross-sectional view of the dielectric jacket extrusion process of FIG. 8. In FIG. 9, the dielectric core **50** with helically wound conductive wiring **49** is rolled on a spool **95.** The dielectric core **50** with helically wound conductive wiring **49** is shown being pulled by force **96** through extrusion die **97**. While the conductive core **50** is traveling through the extrusion die **97**, the outer dielectric jacket **59** is formed from melted dielectric jacket material **98** flowing through extrusion die **97** as is known in the cable making art.

FIG. 10 depicts the conductive rod **60** of FIG 8 after being inserted into a dielectric place holder **70** which serves to hold the conductive rod **60** in place while being subsequently cut up into the conductive buttons of the present invention and while the conductive buttons are positioned so as to mechanically and electrically couple two substrates (e.g., the substrates **32**

and **34** of FIG. 3). The conductive rod **60** is fitted into a hole **72** of the place holder **70** by any suitable method such as, *inter alia*, friction fitting, molding, and glueing.

FIG. 10 shows cutting of the conductive rod **60** at the locations **68** and **69**. The cutting may be accomplished by use of a laser (i.e., "lasering") or by any other suitable method. For example, another suitable method of cutting is mechanical cutting such as with a shearing or an electrical discharge machining (EDM) process. The cutting may be at an angle ϕ with respect to the direction **55**, such that ϕ in a range of $0 < \phi \leq 90$ degrees. FIG. 10 shows conductive buttons **73**, **74**, and **75** after such buttons have been formed by the aforementioned cutting. In embodiments of the present invention, each conductive button may have, *inter alia*, a height that includes about 3 to 5 mils above a top surface **62** of the place holder **70** and about 3 to 5 mils below a bottom surface **64** of the place holder **70** for a total height that is about 6 to 10 mils greater than a thickness "t" of the place holder **70** as shown in FIG. 10.

FIG. 11 depicts the place holder **70** of FIG. 10 after the conductive rod **60** of FIG. 10 and similar conductive rods have been axially cut, leaving conductive buttons **73-81** in the dielectric place holder **70**. FIG. 11 shows concentric through holes that have been formed in each conductive button (e.g., through hole **84** in the conductive button **74**). Such through holes in the conductive buttons **73-81** in FIG. 11 exemplify the discussion *supra*, in conjunction with FIG. 4, of forming an axial through hole in the direction **54** or **55** at a radial center **52** of the dielectric core **50**.

The conductive buttons **73-81** in FIG. 11 were formed after the conductive rod **60** (and similar conductive rods) were fitted within the place holder **70** of FIG. 10 followed by cutting the

conductive rod **60** (and the similar conductive rods) into the conductive buttons **73-81**. Alternatively, the conductive buttons **73-81** could have been formed by first cutting the conductive rod **60** (and the similar conductive rods) into the conductive buttons **73-81** without use of the place holder **70**, followed by fitting the conductive buttons **73-81** into the place holder **70**.

In FIG. 11, the end contacts formed by the method of the present invention are "raised" relative to the dielectric core and dielectric jacket. For example, the end contact **86** of the conductive button **75** is raised relative to the dielectric core and the dielectric jacket of the conductive button **75**. The end contacts, as raised, are also illustrated in FIG. 3, wherein the end contacts **47** are raised (i.e., protrude in the direction **54**) relative to both the dielectric core **40** and the dielectric jacket **44** of the conductive button **38**, and wherein the end contacts **48** are raised (i.e., protrude in the direction **55**) relative to both the dielectric core **40** and the dielectric jacket **44** of the conductive button **38**. The aforementioned raising or protrusion of the end contacts **47** and **48** enables the end contacts **47** and **48** to mechanically and electrically contact conductive structure (i.e., enabling the end contacts **47** and **48** to mechanically and electrically contact the conductive pads **35** and **33**, respectively, of FIG. 3). The aforementioned lasering (i.e., laser cutting) of the conductive rod **60** and similar conductive rods (see FIG. 10) facilitates the raising or protrusion of the end contacts **47** and **48** of FIG. 3, because the laser beam generally cuts a wider path (i.e., wider in the direction **54** or **55** - see FIG. 10) through the dielectric core **50** and dielectric jacket **59** than through the helically wound conductive wiring.

The end contacts of the conductive buttons **73-81** in FIG. 11 may have various shapes